Amendments to the Specification

Please replace Paragraph 0001 of the application with the following amended paragraph:

[0001] This application is related to U.S. ~~patent application Ser.~~ <u>Patent</u> <u>Application</u> No. 09/888,158, entitled "A Method, System, and Program for Transmission of Network Messages on a MODBUS Network", filed on Jun. 22, 2001, <u>(now U.S. Patent No. 7,051,143, issued May 23, 2006)</u> hereby incorporated by reference.

Please replace Paragraph 0003 of the application with the following amended paragraph:

[0003] The MODBUS protocol is well known and is described, for example, on the World Wide Web, (Web) at http://www.modbus.org, ~~and is incorporated herein by reference~~ along with all related Web pages. Different networking schemes relating to factory automation are described in U.S. Pat. Nos. 6,151,625; 5,805,442; 5,251,302; and 5,699,350, and are also incorporated herein by reference.

Please replace Paragraph 0007 of the application with the following amended paragraph:

[0007] In the mid-1990s, MODBUS was again adapted to execute on Ethernet-based networks in the form of a protocol called MODBUS/TCP. This protocol provides a message packet within TCP to encapsulate the MODBUS message, allowing for communications throughout the Internet. The network speed was greatly increased, as were the cabling options. And the address space limitations were removed. Further information on the MODBUS/TCP implementation can be found at http://www.modbus.org~~, which is incorporated by reference~~.

Please replace all references to the drawings using the word "Figure" with the abbreviation "FIG." throughout the specification, such as shown in the following amended paragraph:

[0017] ~~Figure 1~~ FIG. 1 is an overview of a factory automation system. NOTE, HOWEVER, that this change has already been made when the application was published, such that no further changes need to be made from the electronic version published as United States Patent Application Publication No. US 2005/0256964 A1. Nevertheless, for purposes of making this change of record for this amendment, the eleven instances are found in paragraphs 0017, 0018, 0019, 0020, 0023, 0028, 0030, 0034, 0036, 0037, and 0042.

Please replace Paragraph 0024 of the application with the following amended paragraph:

[0024] But for simplicity, we look at this minimum set. The Personal Computer 201 in this diagram is a typical personal computer found in any office or factory environment. It typically has a screen, keyboard, CPU, RAM, and disk drives. Often this type of computer is running a Microsoft Windows operating system, and has a standard web browser such as Netscape or Microsoft Internet Explorer. This Personal Computer 201 could also be a larger computer system or a hand held device such as a PDA, laptop, or ~~every~~ even a cellular phone.

Please replace Paragraph 0029 of the application with the following amended paragraph:

[0029] The IO module 203 is running a process that interprets MODBUS messages, including function code 43. In addition, it is operating software that operates as or emulates an HTTP server, so that the IO module 203 is able to understand the message that arrives and respond with the requested response. Such software could include a full commercial web server combined with software described in the reference code available at www.modbus.org~~, hereby incorporated by reference~~. In another simpler implementation, the web server could be coded to inspect the arriving message for a specific URL, and then

respond to that message with a fixed response that is previously stored in memory. All other URLs or messages arriving on MODBUS function code 43 would be rejected in this scenario. With this design, additional response could also be coded into the IO module 203 to respond with different URLs. Each URL would be looked up in a simple table, and the preset responses returned when that URL was received. A separate functionality could also keep the responses updated as conditions changed in the IO module 203. For instance, if the module determined that the module had an error, the software could change a string "OPERATIONAL" to "ERROR STATE" so that the error indication is returned when a particular URL is requested.

Please replace Paragraph 0030 of the application with the following amended paragraph:

[0030] In order for the PLC 202 to bridge between the MODBUS type messages of the I/O Network 205 and the HTTP protocols that the browser in the Personal Computer 201 understands, the PLC 202 requires a set of software processes to translate the messages. This A block diagram of this software is shown in FIG. 2.

Please replace Paragraph 0043 of the application with the following amended paragraph:

[0043] Each MODBUS RTU message 112 is proceeded by a 3 and a half character gap 105 between messages. This silence on the serial line designates the beginning of the message. A one byte address 106 follows that designates where the message is to be delivered on a daisy-chained serial network. The MODBUS PDU follows, defined as the Function Code 107, the MEI type 108 and the Encapsulated Data 109. The function type 107 is a one byte designation that the message is a MEI message, and is set to 43 decimal. The MEI type 108 follows to designate the encapsulated data 109 as HTTP. The HTTP data is in the Encapsulated Data 109 field. This is followed by a 2 byte CRC 110. This is a

CRC-16 algorithm that is described in the MODBUS manual GI-MBUS-000. The CRC 110 is followed by a one byte EOF 111 designation.

Please insert the following paragraph after Paragraph 0044 and before Claim 1 of the application.

What is claimed is: